

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

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Claim 1 (currently amended) An electrode for electric discharge surface treatment ~~used in electric discharge surface treatment for forming a hard coating on the surface of a treated material through the energy by generating electric discharge between the electrode and the treated material, characterized by mixing comprising a compressed mixture of~~ at least a powder of metal carbide and a powder of metal hydride ~~and performing heating treatment after compression molding and desorbing hydrogen in the metal hydride to be formed.~~

B3 Claim 2 (currently amended) [[An]] The electrode for electric discharge surface treatment as defined in claim 1, ~~characterized in that~~ wherein the metal carbide is titanium carbide and the metal hydride is titanium hydride.

Claim 3 (currently amended) [[An]] The electrode for electric discharge surface treatment as defined in claim 1, ~~characterized in that~~ wherein a mixture the ratio of the powder of the metal carbide to the powder of the metal hydride is set according to desired electrode strength and crumbliness.

Claim 4 (currently amended) A manufacturing method of an electrode for electric discharge surface treatment ~~used in electric discharge surface treatment for forming a hard coating on the surface of a treated material through the energy by~~

~~generating electric discharge between the electrode and the treated material;~~  
~~characterized by comprising~~ mixing at least a powder of metal carbide and a powder  
of metal hydride; ~~and performing heating treatment after~~ compression molding and  
desorbing hydrogen in the metal hydride; and subsequently

performing heat treatment to manufacture the electrode for electric discharge  
surface treatment.

Claim 5 (currently amended) [[A]] The manufacturing method of an electrode  
for electric discharge surface treatment as defined in claim 4, characterized in that the  
metal carbide is titanium carbide and the metal hydride is titanium hydride.

B 3 Claim 6 (currently amended) [[A]] The manufacturing method of an electrode  
for electric discharge surface treatment as defined in claim 4, ~~characterized in that~~  
wherein a mixture mixing ratio of the powder of the metal carbide to the powder of the  
metal hydride is set according to desired electrode strength and crumbliness.


Claim 7 (currently added) An electrode for electric discharge surface treatment  
obtained by mixing at least a powder of metal carbide and a powder of metal hydride;  
compression molding the mixture and desorbing hydrogen in the metal hydride; and  
subsequently performing heat treatment to manufacture the electrode for electric  
discharge surface treatment.

Claim 8 (currently added) The electrode for electric discharge surface treatment  
as defined in claim 7, wherein the metal carbide is titanium carbide and the metal  
hydride is titanium hydride.

Claim 9 (currently added) The electrode for electric discharge surface treatment as defined in claim 7, wherein the ratio of the powder of the metal carbide to the powder of the metal hydride is set according to desired electrode strength and crumbliness.

Claim 10 (currently added) A method for discharge surface treating a work using an electrical discharge machine comprising positioning an electrode comprising a compressed mixture of at least a powder of metal carbide and a powder of metal hydride opposite a material to be surface treated; and

forming a coating on the material by causing electrical discharge between the electrode and the material.

 Claim 11 (currently added) The method as defined in claim 10, wherein the metal carbide is titanium carbide and the metal hydride is titanium hydride.

Claim 12 (currently added) The method as defined in claim 10, wherein the ratio of the powder of the metal carbide to the powder of the metal hydride is set according to desired electrode strength and crumbliness.

Claim 13 (currently added) The electrode for electric discharge surface treatment as defined in claim 3, wherein the ratio of the powder of the metal carbide to the powder of the metal hydride is 1:9 to 9:1.

Claim 14 (currently added) The electrode for electric discharge surface treatment as defined in claim 6, wherein the mixing ratio of the powder of the metal carbide to the powder of the metal hydride is 1:9 to 9:1.

Claim 15 (currently added) The electrode for electric discharge surface treatment as defined in claim 9, wherein the ratio of the powder of the metal carbide to the powder of the metal hydride is 1:9 to 9:1.

*B<sup>3</sup>  
cont* , Claim 16 (currently added) The electrode for electric discharge surface treatment as defined in claim 12, wherein the ratio of the powder of the metal carbide to the powder of the metal hydride is 1:9 to 9:1.

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